

Work Order ID 134621

Monday, July 13, 2015 1:23:12 PM

134621 OFFSHORE

Page 1

Item ID: D135-751-011 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Skidtube with Standard Wearplates Fits LH or RH
Start Date: 7/13/2015 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/13/2015 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: MLJ Date: JUL 13 2015 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID:	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3507	Rev D								
DSI 9661	A								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D135-751-011		CHG002						

B134621

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
Root Cause				FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐											

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Monday, July 13, 2015 1:23:12 PM

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Page 2

Item ID: D135-751-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/13/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

120

Skidtubes

Skidtubes

Skidtubes

Memo

0.03

1-Cut Aft end as per dwg D3507

2-Deburr ends

3-Drill Aft & Fwd Cap holes using DT8678 & DT8901

4-Locate DT8870 & Drill Ground wire hole on top of Tube.

6-Locate DT8870 with #30 cleco in Ground wire hole ,then Pilot Drill all X-Bolt holes using #30" drill.****DO NOT OPEN AFT CAP HOLES*****

7-Open crossbolt holes to 0.3125" (3 per side). Drill pilot holes for wearplates using Dt8868,Use DT8892 FOR REAR WEARPLATE HOLES.

8-Open six rear wearplate holes using DT8892.Open all wearplate holes to 0.297"

9-Open ground wire hole .297" section E-E

10-Open Aft & Fwd Cap holes using .208" drill.

11-Bore out aft end of tube as per Dwg D3507 & Detail "B".

12- Section G-G holes must be laid out manually, open to #30.

13-Deburr holes.

1 0 8615-0722

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
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								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
☐ OTHER : _____					

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134621

Page 4

Item ID: D135-751-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/13/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

170

Skidtubes

Skidtubes

0.00

0.01

Memo1-Open X-Bolt holes to .375" (1 Places) & .500" (2 Places) as per Dwg D3507.
and section G-G to .750" (2 places)

2-Counter Sink X-BOLT holes as per Dwg D3507

3-Deburr and blow out chips from inside of tube.

4-Bond web as per Dwg D3507 & OSI 015

A/R 241 Sike Flex Batch: 132705
Exp Date: 7-2-12
start time: 3:30pm
end time: _____

5-Weld x-bolt spacers as per Dwg D3507 and Detail C-C & D-D and G-G

A/R AL ROD Batch: M131562

6-Grind welds flush

7-Drill Rivet Holes as per Dwg D3507 Using Dt8871A&B

8-Deburr Rivet holes.

DGL 15-8-S.

DGL 15-8-S.

BE 15-08-19

DD 15-8-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐			FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misaligned ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

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Page 5

Item ID: D135-751-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Skidtube with Standard Wearplates Fits LH or RH
 Start Date: 7/13/2015 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/13/2015 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC10- Inspect visual per QSI004- ground welds	0.00							DAS 38 9-89
180									
QC	Memo	0.00							
Quality Control									
185									
187									
190									
190									
Skidtubes									
	Memo	0.02							
Skidtubes	1-Rivet D3506-1/-3 as per Dwg D3507.								
200									
	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
200									
QC	Memo	0.00							
Quality Control									

Re-Aluminum only

DAS
10
9-89

QC7

DAS
03
9-89

15-8-26

15-8-27

15-8-27

AUG 25 2015

AUG 27 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 134621

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134621

Page 6

Item ID: D135-751-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Stop ***NS2***Start Date: 7/13/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/13/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Pressure Wash per QSI005 4.3	0.00							
210									
HandFinish	Memo	0.01							
Hand Finishing	<i>Touch up</i> Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
	<i>[Signature]</i>								
220		0.00							
220									
SprayPaint	Memo	0.01							
Spray Painting	1- Apply Primer as per QSI 005 4.2.1.3.3 and dwg A/R Primer Batch: <u>130992</u>								
	2- Paint two coats of White paint as per QSI 005 4.2 and dwg A/R Paint Batch: <u>132664</u>								
230	QC14- Inspect Spray Paint	0.00							
230									
QC	Memo	0.00							
Quality Control									

*1 15-8-31 [Signature]**1* **DAS 41 9-89**
*15-9-3**1x d [Signature] 15/09/15* **DAS 15 9-89**

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Misabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
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Page 7

Item ID: D135-751-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Stop

NS2

Start Date: 7/13/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/13/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

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Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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260

0.00

260

HandFinishing

HandFinish

Memo

0.02

Hand Finishing

1- Install Wearplate & Ground Wire inserts as per Dwg D3507.

1-Inspect for Foreign objects

2-Install Fwd & Aft caps as per Dwg D3507 And Detail "A" & "B"

A/R 241 Sika Flex Batch: 11136133Exp Date: 16/12

3-Install Wearplates as per Dwg D3507,

Note: Install (1) Bolt and (1) washer on Ground Wire insert on top of tube

Do not Install Screws where indicated on Dwg (Note #6)

A/R 241 Sika Flex Batch: 11136133Exp Date: 16/12

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 11131349 RTU 598 11131311 16/11

5- Wing Walk as per Dwg D3507 and QSI 005 4.4

Batch: 1113254912 4 11/13/2015

DQA: _____ Date: _____



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Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
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Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 134621

Monday, July 13, 2015 1:23:12 PM

134621

Page 9

Item ID: D135-751-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Stop

NS2

Start Date: 7/13/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/13/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

300

0.00

300

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D135-751-011

Location:

PPP Rev:

offshore

DAS

02

9-89

SEP 23 2015

310

QC21- Final Inspection - Work Order Release

0.00

310

QC

Memo

0.00

Quality Control

5# 20150923

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Monday, July 13, 2015 1:23:15 PM

Page 1

Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A06-06-21New Issue JLM
 IPP Rev:B 06-12-18 As per Rev B JLM
 IPP Rev:C 07-12-11 ECN 1036 as per revB DD
 IPP Rev D 08.11.04 Added DT9431 to sequence 5 EC verf DD IPP Rev E
 10.02.22 per pAR 09-043 EC verified by: DD IPP Rev:F 10.06.09
 remove seq110 DD verf:EC IPP Rev G 10.09.17 added
 D3507-1-bent EC verified by:DD IPP REV:H 13.12.11 ECN13-619/
 CHG002 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS7-1032-130

AELS8-1032-130 Purchased

No

Each

3,469.000

38

***AI S7-1032-130*-X**

Rivnut ALS4-1032-130

15/09/15

Location

Loc Qty

Loc Code

CCK003

1516

M132451

x20

M128649

1516

M133077

x18

FG

100

121444

50

M128649

50

st549

1853

M128649

1853

D3507-1-BENT

Manufactured

No

120

Each

4.0000

1

1

D3507-1-BENT

Skidtube Assembly EC135

15-07-21

Location

Loc Qty

Loc Code

LG002

4

131476

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 2

Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

D3504-1 Manufactured No

170 Each 13.0000 2 2

D3504-1

Crossbolt Spacer

BE 1508-19

Location

Loc Qty

Loc Code

LG

13

131472

13

2

D3504-3 Manufactured No

170 Each 48.0000 1 1

D3504-3

Crossbolt Spacer

BE 1508-19

Location

Loc Qty

Loc Code

LG001

48

105604

48

1

D3504-5 Manufactured No

170 Each 15.0000 2 2

D3504-5

Crossbolt Spacer

BE 1508-19

Location

Loc Qty

Loc Code

LG

12

131473

12

1

LG001

3

130425

3

1

D3505-1 Manufactured No

170 Each 5.0000 1 1

D3505-1

Web

Location

Loc Qty

Loc Code

LG002

5

130835

5

1

DGL

15-8-5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

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Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

D3506-1 Manufactured No 190 Each 32.0000 4 4

D3506-1

Doubler

**

15-8-27

Location

Loc Qty

Loc Code

LG001

32

130357

3

131475

29

D3506-3 Manufactured No 190 Each 50.0000 2 2

D3506-3

Doubler

**

15-8-27

Location

Loc Qty

Loc Code

LG001

50

131165

21

131267

29

MS20601-AD4W3 Purchased No 190 Each 363.0000 12 12

MS20601-AD4W3

Rivet

**

15-8-27

Location

Loc Qty

Loc Code

CCK004

100

m132699

100

GA

100

m132551

100

ST308

163

114538

6

m132256

157

M131618

12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
								Lead hand / Supervisor Approval Verification			
								QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Picklist Print

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Page 4

Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

AELS8-1032-225

Purchased

No

260

Each

1,103.000

1

1

AI S4-1032-225

Rivnut

ll 13/09/15

Location

Loc Qty

Loc Code

FG

120

M127028

120

FP001

492

M131582

492

st549

491

M131582

491

x 1

AN3C4A

Purchased

No

260

Each

1,457.000

31

31

AN3C4A

Bolt

ll 13/09/15

Location

Loc Qty

Loc Code

FG

20

122814

20

FP001

937

M132551

937

ST350

500

M132317

500

M132930

x 31

AN3C5A

Purchased

No

260

Each

505.0000

2

2

AN3C5A

Bolt

ll 13/09/15

Location

Loc Qty

Loc Code

FG

5

122800

5

ST

56

121708

56

ST338a

444

M131803

44

M132640

400

M132930

x 2

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Shop Packet Print

Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

AN526C1032R10

Purchased No

260 Each 61.0000 2 2

AN526C1032R10

Screw

**

11 15/09/15

Location

Loc Qty

Loc Code

FP001

2

M128712

12

108062

2

ST327

59

m128712

59

D2965

Manufactured No

260 Each 93.0000 1 1

D2965

Cap

**

11 15/09/15

Location

Loc Qty

Loc Code

FP001

93

127852

93

11

D2965-3

Manufactured No

260 Each 88.0000 1 1

D2965-3

Cap

**

11 15/09/15

Location

Loc Qty

Loc Code

FP001

88

120969

1

126369

87

11

D3492-1

Manufactured No

260 Each 99.0000 4 4

D3492-1

Plug

**

11 15/09/15

Location

Loc Qty

Loc Code

FP001

99

131113

9

131952

40

133498

50

14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

D3492-3

Manufactured No

260

Each

126.0000

4

4

D3492-3

Plug

all 15/09/15

Location

Loc Qty

Loc Code

FP001

126

125905

2

131036

22

131899

53

133470

49

x4

D3492-7

Manufactured No

260

Each

82.0000

2

2

D3492-7

Plug

all 15/09/15

Location

Loc Qty

Loc Code

FP001

82

106110

82

x2

D4918-047

Manufactured No

260

Each

6.0000

1

1

D4918-047

Wearplate Aft

all 15/09/15

Location

Loc Qty

Loc Code

FP001

6

130440

6

x1

D4918-1

Manufactured No

260

Each

14.0000

1

1

D4918-1

Wearplate Fwd

all 15/09/15

Location

Loc Qty

Loc Code

FP001

12

130441

3

132158

9

x1

FP002

2

119891

2

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Page 6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

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Page 7

Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

D4918-3 Manufactured No

260 Each 9.0000 1 1

D4918-3

Wearplate Center Fwd

**

el 13/09/15

Location

Loc Qty

Loc Code

FP002

9

130442

9

X1

D4918-5 Manufactured No

260 Each 7.0000 1 1

D4918-5

Wearplate Center Aft

**

el 13/09/15

Location

Loc Qty

Loc Code

FP002

7

119893

1

X1

130443

6

NAS1149C0332R Purchased No

260 Each 4,305.000 33 33

NAS1149C0332R

WASHER

**

el 13/09/15

Location

Loc Qty

Loc Code

FP001

2140

m130325

2140

V33

GA

265

m131618

265

ST271

1900

m129390

72

m132262

1828

NAS1611-007 Purchased No

260 Each 324.0000 2 2

NAS1611-007

O-RING

**

el 13/09/15

Location

Loc Qty

Loc Code

FP001

324

103697

324

X2

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Page 7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
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OTHER :																					

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Page 8

Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased No

260

Each

511.0000

4

4

NAS1611-010

O-RING

**

all 1/8" x 1/4"

Location

Loc Qty

Loc Code

FP001

511

m130770

343

m131618

168

X 4

NAS1611-013

Purchased No

260

Each

294.0000

4

4

NAS1611-013

O-Ring

**

all 1/8" x 1/4"

Location

Loc Qty

Loc Code

FP001

294

m130758

294

X 4

AN3C4A

Purchased No

280

Each

1,457.000

8

8

AN3C4A

Bolt

**

DAS
27
9-89

DAS
26
9-89

Location

Loc Qty

Loc Code

FG

20

122814

20

FP001

937

M132551

937

ST350

500

M132317

500

8

SEP 22 2015

D3512-041

Manufactured No

280

Each

4.0000

2

2

D3512-041

Wearplate

**

DAS
27
9-89

DAS
26
9-89

Location

Loc Qty

Loc Code

st612

4

129841

4

B133/30

2

SEP 22 2015

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Work Order ID: 134621

134621

Parent Item: D135-751-011

D135-751-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 7/13/2015

Required Date: 7/13/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

280

Each

4,305.000

8

8

NAS1149C0332R

WASHER

DAS

27

9-89

SEP 22 2015

DAS

28

9-89

Location

Loc Qty

Loc Code

FP001

2140

m130325

2140

GA

265

m131618

265

ST271

1900

m129390

72

m132262

1828

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-751 REV. C
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D135-751 REV. 2

REF. FAA STC: SR01709SE
REF. EASA STC: EASA.IM.R.S.01278

PURPOSE:

THE D135-751-043 WEARPLATE KIT AT CHG 002 CONTAINS WEARPLATES WITH AN IMPROVED WEAR PATTERN AND A COATING THAT ELIMINATES THE NEED FOR THE RUBBER GASKETS. THE D135-751-011 SKIDTUBE INSTALLATION AT CHG 002 AND D135-751-041 REPLACEMENT SKIDTUBE AT CHG 002 CONTAIN THE NEW WEARPLATES.

THE DSI 9661-011 WEARPLATE UPGRADE KIT IS AVAILABLE TO UPGRADE EXISTING D135-751-011 KITS AT CHG 001 WITH IMPROVED AFT WEARPLATES.

CHANGE:

FOR D135-751-011/-041/-043 KITS AT CHG 002, THE WEARPLATE INSTALLATION PROCEDURE OF ICA-D135-751 SECTION 32.3 IS REVISED AS FOLLOWS. IF INSTALLING THE DSI 9661-011 WEARPLATE UPGRADE KIT, THE PARTS SHOULD BE INSTALLED USING THE FOLLOWING INSTRUCTION.

32.3 WEARPLATE REPLACEMENT

IF REINSTALLING D3508-X WEARPLATES ON D135-751-011/-041 KITS AT CHG 001, THE WEARPLATES SHOULD BE INSTALLED WITH D3558-X GASKETS PER ICA-D135-751 REV. 2. FOR D135-751-011/-041/-043 KITS AT CHG 002, THE WEARPLATES SHOULD BE INSTALLED WITHOUT GASKETS, AS INDICATED BELOW. IF D4918-X WEARPLATES ARE BEING INSTALLED ON D135-751-011/-041 SKIDTUBES AT CHG 001, THEY SHOULD LIKEWISE BE INSTALLED WITHOUT GASKETS AS INDICATED BELOW.

- 32.3.1 REMOVE WEARPLATES AND GASKETS (IF PRESENT) BY REMOVING THE AN3C BOLTS THAT SECURE THEM TO THE BOTTOM OF THE SKIDTUBE.
- 32.3.2 CHECK FOR CORROSION AND MECHANICAL DAMAGE IN ACCORDANCE TO CHAPTER 5 AND REPAIR AS REQUIRED. REFINISH BOTTOM OF SKIDTUBE PER CHAPTER 5 OF ICA-D135-751.
- 32.3.3 INSTALL REPLACEMENT D4918-1/-3/-5/-047 WEARPLATES USING AN3C BOLTS AS APPLICABLE AS SHOWN IN FIGURE 1 OF THIS SERVICE INSTALLATION. INSTALL (QTY 2) D3512-041 WEARPLATES (ITEM 27) OVER FWD AND AFT CLAMPS AS SHOWN IN FIGURE 1 USING AN3C BOLTS AND AN960C10L WASHERS. TORQUE BOLTS 15-25 IN-LB (1.7-2.8 N-m). SEAL WEARPLATE INSERTS USING SIKAFLEX-241/-291 OR PROSEAL 890 MIL-S-8802 CLASS B2 SEALANT.

WEIGHT AND BALANCE:

USE THE FOLLOWING WEIGHT AND BALANCE INFORMATION FOR DART D135-751-011 SKIDTUBE INSTALLATION AT CHG 002.

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		ARM	MOMENT	ARM	MOMENT
D135-751-011 CHG 002 Skidtube Installation	24.5 lb 11.2 kg	±39.4 in ±1.0 m	±966 in-lb ±11.2 m-kg	147.1 in 3.7 m	3604 in-lb 41.5 m-kg

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A	NEW ISSUE	DW	13.08.21
REV.	DESCRIPTION	BY	DATE
DESIGN	DW	DART AEROSPACE USA, INC KENT, WA	
DRAWN	DW		
CHECKED	GP	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9661	SHEET 1 OF 3
APPROVED	WJ	TITLE	SCALE
DE APPR.	WJ	REVISED WEARPLATE KIT	NTS
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PARTS LIST:

THE PARTS LISTS IN SECTION 32.9 OF ICA-D135-751 (PAGE 35) AND SECTION 5.0 OF IIN-D135-751 (PAGE 11) ARE AMENDED AS FOLLOWS FOR D135-751-011 @ CHG 002 AND LATER.

32.9 PARTS LIST (ICA-D135-751)**5.0 PARTS LIST (IIN-D135-751)**

Item	QTY -011	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X			D135-751-011	SKIDTUBE INSTALLATION
	1	X		D135-751-041	REPLACEMENT SKIDTUBE
			X	D135-751-043	WEARPLATE KIT

IS:

20A	1		1	D4918-1	WEARPLATE (REPLACES D3508-1)
21A	1		1	D4918-3	WEARPLATE (REPLACES D3508-3)
22A	1		1	D4918-5	WEARPLATE (REPLACES D3508-5)
23A	1		1	D4918-047	WEARPLATE (REPLACES D3508-7)
27	2		2	D3512-041	WEARPLATE (REPLACES D3512-1)

WAS:

20A	1		1	D3508-1	WEARPLATE
20B	1		1	D3558-1	GASKET
21A	1		1	D3508-3	WEARPLATE
21B	1		1	D3558-3	GASKET
22A	1		1	D3508-5	WEARPLATE
22B	1		1	D3558-5	GASKET
23A	1		1	D3508-7	WEARPLATE
23B	1		1	D3558-7	GASKET
27	2		2	D3512-1	WEARPLATE

THE PARTS LIST FOR THE DSI 9661-011 KIT IS AS FOLLOWS:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI 9661-011	WEARPLATE UPGRADE KIT
1	D4918-047	WEARPLATE
2	D3512-041	WEARPLATE

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MFG. APPR.	<i>N/A</i>	DSI 9661	SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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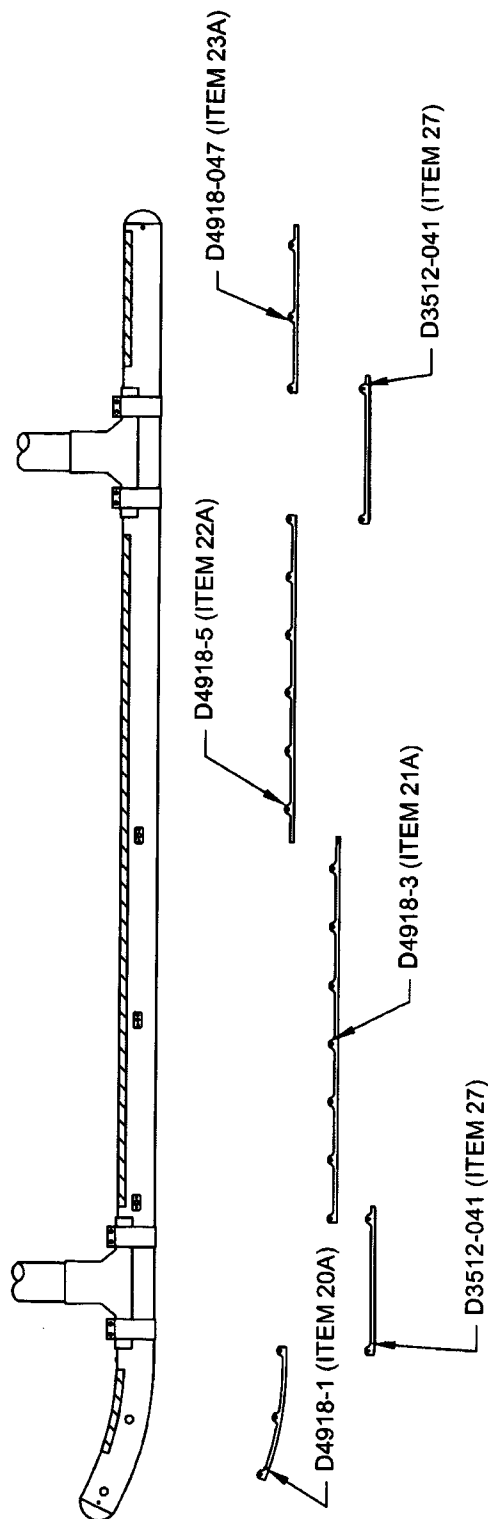


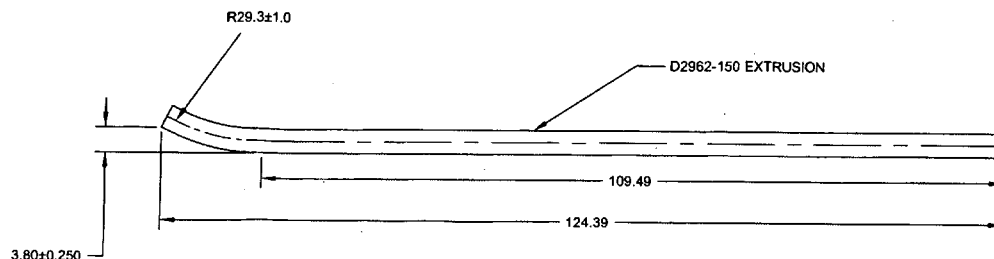
FIGURE 1: WEARPLATE INSTALLATION

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APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	REVISED WEARPLATE KIT	NTS
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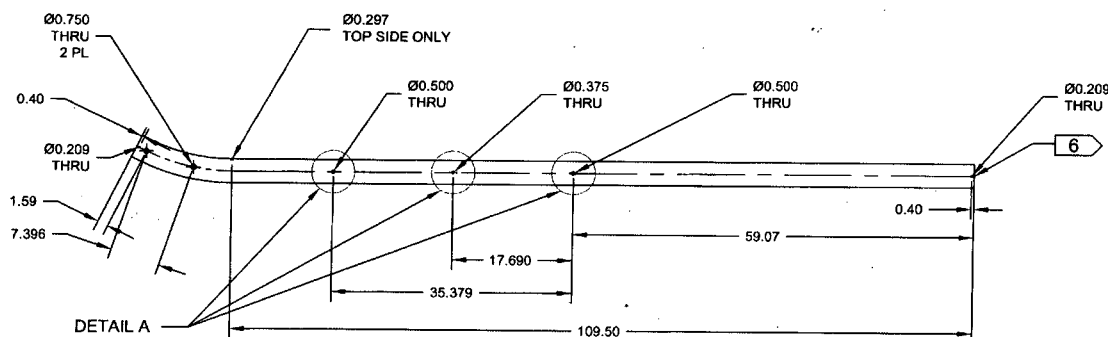
Qty	Part Number	Description
X	D3507-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2965	CAP
1	D2965-3	CAP
4	D3492-041	PLUG ASSEMBLY
4	D3492-043	PLUG ASSEMBLY
2	D3492-047	PLUG ASSEMBLY
2	D3504-1	CROSS BOLT SPACER
1	D3504-3	CROSS BOLT SPACER
2	D3504-5	CROSS BOLT SPACER
1	D3505-1	WEB
4	D3508-1	DOUBLER
2	D3508-3	DOUBLER
1	D4918-1	WEARPLATE
1	D4918-3	WEARPLATE
1	D4918-5	WEARPLATE
1	D4918-047	WEARPLATE
38	AELS-1032-130	INSERT
1	AELS-1032-225	INSERT
31	AN3C4A	BOLT
2	AN3C5A	BOLT
2	AN526C1032-10	SCREW
33	AN960C10L	WASHER
12	MS20601AD4W3	RIVET

GENERAL NOTES:

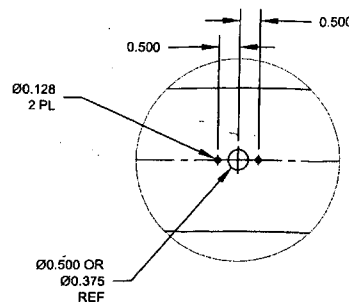
- MATERIAL: N/A
- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3505-1 WEB
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3.
BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTERLINE PER DART QSI 005 4.4 (OPTIONAL)
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- DIMENSIONS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- IDENTIFICATION: IDENTIFY WITH DART B/N PER DART QSI 044 6.4 (VIBRATING STYLUS) ON I.D. OF TUBE
- WEIGHT: 24.1 LB (FROM IIN-D135-751)
- WELDING TO BE DONE PER DART QSI 004
- INSERT D3505-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING
- USE DART DRILL TEMPLATE DT8868 TO LOCATE AND DRILL Ø0.297 HOLES (38 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION C-C (38 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS



D3507-1 BENDING/CUTTING DETAIL

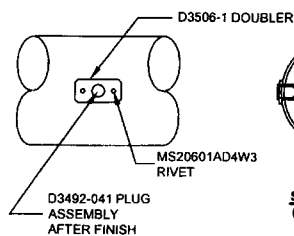


D3507-1 DRILLING DETAIL



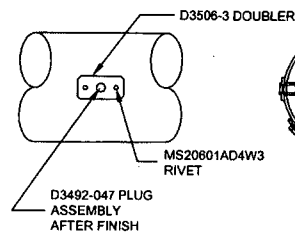
DETAIL A
TYP, 6 PL
SCALE 3:10

D	REMOVE D3558-X GASKETS, D4918-X WAS D3508-X REVISE FINISH TO ADD PAINT AS THE PREFERRED FINISH. REVISED NOTES	DW	13.08.30
C	ADD D3504-5, FOR SKID GEAR DEFLECTOR; CHANGE FWD CAP BOLT TO AN526C1032-10 SCREW	DC	07.09.19
B	ADD GASKET, CHANGE HARDWARE MAT'L	PH	06.11.01
A	NEW ISSUE	PH	06.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	DW	DART AEROSPACE USA, INC KENT, WA	
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MFG. APPR.	AN	D3507	SHEET 1 OF 2
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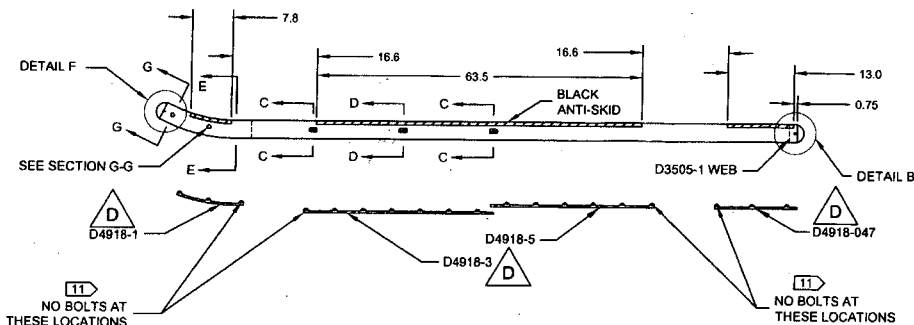
SECTION C-C
(SCALE 3:10)

- AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.500 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D3504-1 CROSS BOLT SPACER 2 PL
 3. WELD INTO PLACE AND GRIND FLUSH
 4. IF REQUIRED, PASS Ø0.404 (Y" DRILL) THRU HOLE
 5. INSTALL D3506-1 DOUBLER 4 PL USING MS20601AD4W3 RIVET 8 PL
 6. AFTER FINISH, INSTALL D3492-041 PLUG ASSEMBLY 4 PL

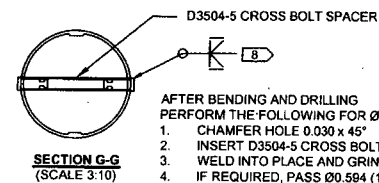
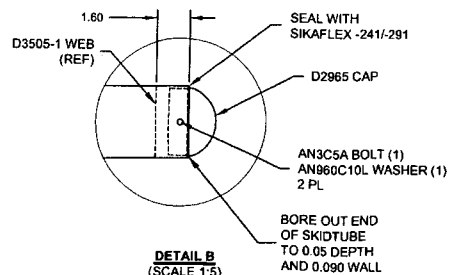
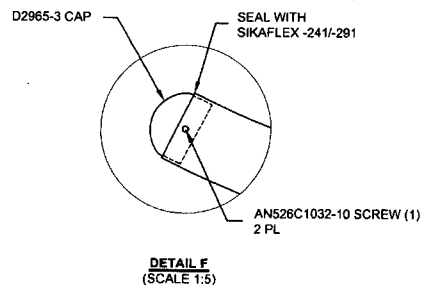


SECTION D-D
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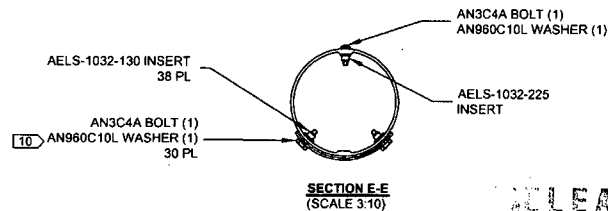
- AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D3504-3 CROSS BOLT SPACER 1 PL
 3. WELD INTO PLACE AND GRIND FLUSH
 4. IF REQUIRED, PASS Ø0.277 (J" DRILL) THRU HOLE
 5. INSTALL D3506-3 DOUBLER 2 PL USING MS20601AD4W3 RIVET 4 PL
 6. AFTER FINISH, INSTALL D3492-047 PLUG ASSEMBLY 2 PL



D3507-041 ASSEMBLY DETAIL



- AFTER BENDING AND DRILLING
PERFORM THE FOLLOWING FOR Ø0.750 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D3504-5 CROSS BOLT SPACER 2 PL
 3. WELD INTO PLACE AND GRIND FLUSH
 4. IF REQUIRED, PASS Ø0.584 (19/32 DRILL) THRU HOLE
 5. AFTER FINISH, INSTALL D3492-043 PLUG ASSEMBLY 4 PL



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2013-12-10

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Work Order ID 134621

Monday, July 13, 2015 1:23:12 PM

134621 OFFSHORE

Page 1

Item ID: D135-751-011 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Skidtube with Standard Wearplates Fits LH or RH
Start Date: 7/13/2015 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 7/13/2015 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: MLJ Date: JUL 13 2015 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3507	Rev D								
DSI 9661	A								

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DC Memo 0.00
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